# Assumptions

The following assumptions were used by the survey respondents in formulating their market estimates:

o Penetration is based on US population figures that assume 1.5% annual growth: 1992 / 255 million; 1993 / 258.5 million; 1998 / 275.8 million; and 2003 / 300.3 million.

o Recently we received end of year 1993 reported penetration and subscriber figures for New PCS, Satellite, Paging, Dedicated Data, Cellular and SMR/ESMR. Wherever possible, five and ten year growth figures use the 1993 figures as the baseline.

o Service descriptions and capabilities are based on definitions set forth in the *Telocator (PCIA) Service Descriptions Document for Personal Communication Services*. This document is available at PCIA.

o We assume the existence of a fully competitive environment, where services coexist simultaneously and the demand for one service may influence the demand for others.

o Existing services evolve into more mature services possibly offering greater functionality. For example, paging services evolve to advanced paging where customers are offered greater messaging capabilities. The survey matrices listed these services together and a single forecast was requested.

o Cellular, Advanced Cellular, ESMR, and New PCS share similar service descriptions. Although at the point of licensing these services may not all provide the same set of capabilities, it can be assumed that over time each will meet their full range of capabilities as described in the *Service Descriptions* document.

o Quantity of subscriptions was used; not quantity of subscribers. For instance, New PCS 1800 and other listed services may include a pager for call notification. Subscribers for such multiple services were counted as both a New PCS 1800 customer, for example, and a paging customer. When a single customer uses more than one type of service, the customer is included in each service count as one subscription.

**Additional Note:**

**Coverage area requirement:** The original survey and subsequent analyses did not stipulate a service coverage area requirement, or analyze its effect on demand. The industry knows first hand from PCS market trials, and from experience in cellular and paging, that coverage is one of the most critical factors in demand for a PCS service. In addition, the FCC has mandated that 90% of the population must be covered by the New PCS networks, by Year Ten.

**The FCC's Second Report and Order on PCS**

On September 23, the FCC's Second Report and Order ruled that the new spectrum in the Emerging Technologies Band would be allocated to the industry for PCS, and designated the market sizes service areas, and eligibililty. Seven new spectrum licenses per market are to be auctioned to the public for PCS service within the 1850-1970 MHz band and the 2130-2200 band. Of the licenses, two will be 30 MHz, one will be 20 MHz , and four in the upper band will be 10 MHz. The size of the service area corresponds to the Rand McNally designations of Basic Trading Area (BTA) and Major Trading Area (MTA) for the two 30 MHz licenses in the lower band. The licenses can be aggregated up to 40 MHz total. The Second Report and Order on PCS established operating rules including eligibility criteria for cellular carriers, and establishment of a 90% coverage requirement for PCS carriers by Year 10. For additional details on this ruling, please contact PCIA or the FCC.

# Conclusion

The respondents of this survey and the PCIA membership have been waiting in anticipation for the rules and regulation that will govern PCS services to be finalized, so that business strategies and critical decisions can be made. As these important rulings are completed, PCIA is in a constant process of analysis, and we will continue to serve our members and the telecommunications community by producing industry forecasts as needed.

The US PCS industry is fortunate to have an FCC that supports rapid and efficient deployment of a new PCS industry. As New PCS ignites the second "wireless revolution", as paging and messaging services expand to new markets, as cellular maintains a strong subscriber base and diversifies service offerings, and as ESMR offers new wide area coverage service offerings, PCIA members will continue to inform Wall Street, Congress, federal regulatory agencies, and US industry on technical and market developments that affect the wireless industry.

For more information, please contact the Personal Communications Industry Association at 202 467 4770 voice or 202 467 6987 fax.

# 1994 PCS Market Demand Forecast

*Personal Communications Industry Association*

Personal Communications Services (PCS) is defined by PCIA as " a broad range of individualized telecommunications services that enable people or devices to communicate, independent of location."

PCS technologies examined in this report include:

- New 2 GHz PCS
- Satellite
- Paging
- Dedicated Data
- Cellular
- SMR/ESMR

This report shows projected demand for PCS Services subscriptions for Year Five (1998) and Year Ten (2003).

The results were derived from a PCS industry survey conducted over 4 months by the Personal Communications Industry Association (formerly Telocator).

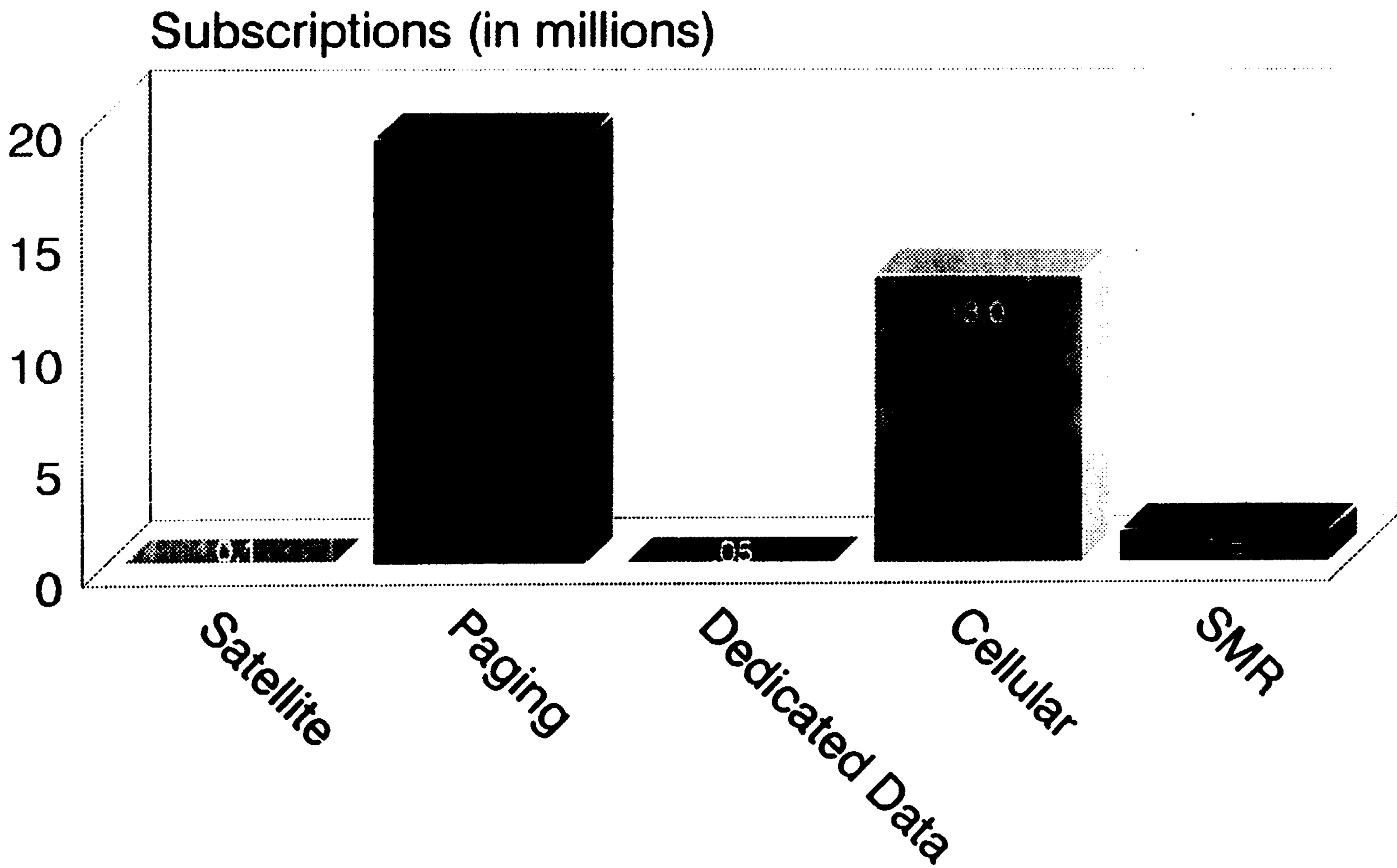
Over 30 companies involved in PCS responded to the survey.

Results are provided in terms of population based penetration and quantity of subscriptions for each service.

# Primary Findings

- All 8 services will continue to grow despite competition.
- Multiservice use is expected.
- New PCS adds new value to industry ("whole pie grows").
- Wide variety of service offerings is expected.
- High potential for residential service growth exists.
- Data PCS - 70% of new services are expected to offer data.
- Timing of service deployment is expected to affect demand for specific services.

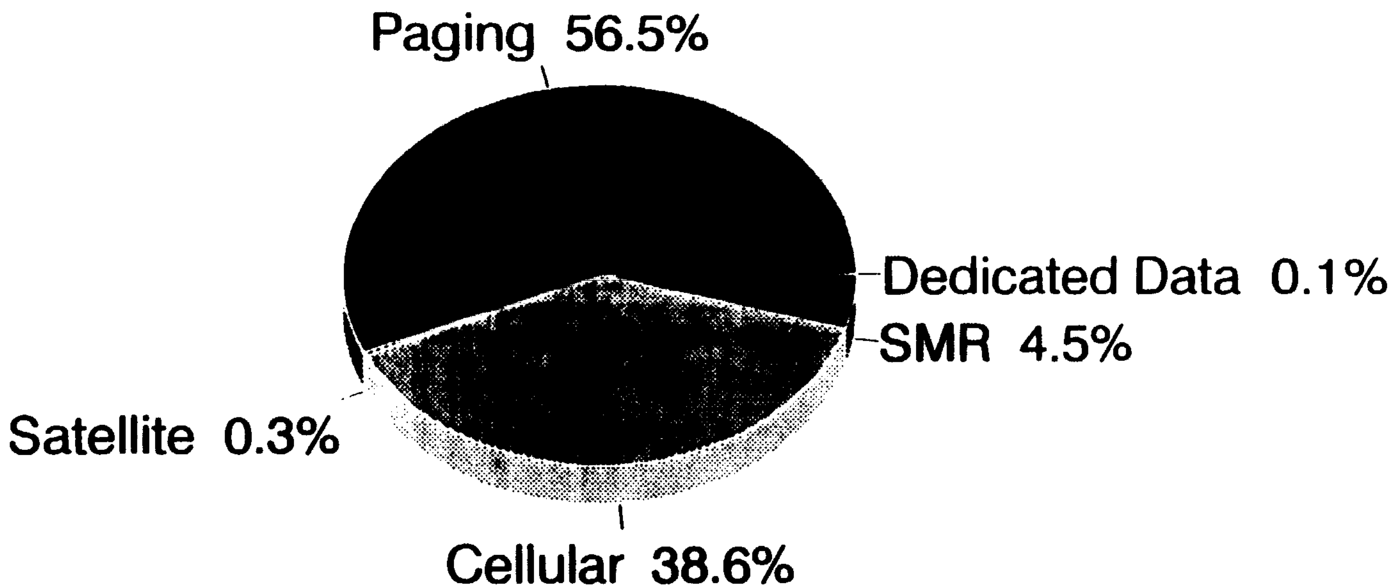
# Total 1993 Subscriptions



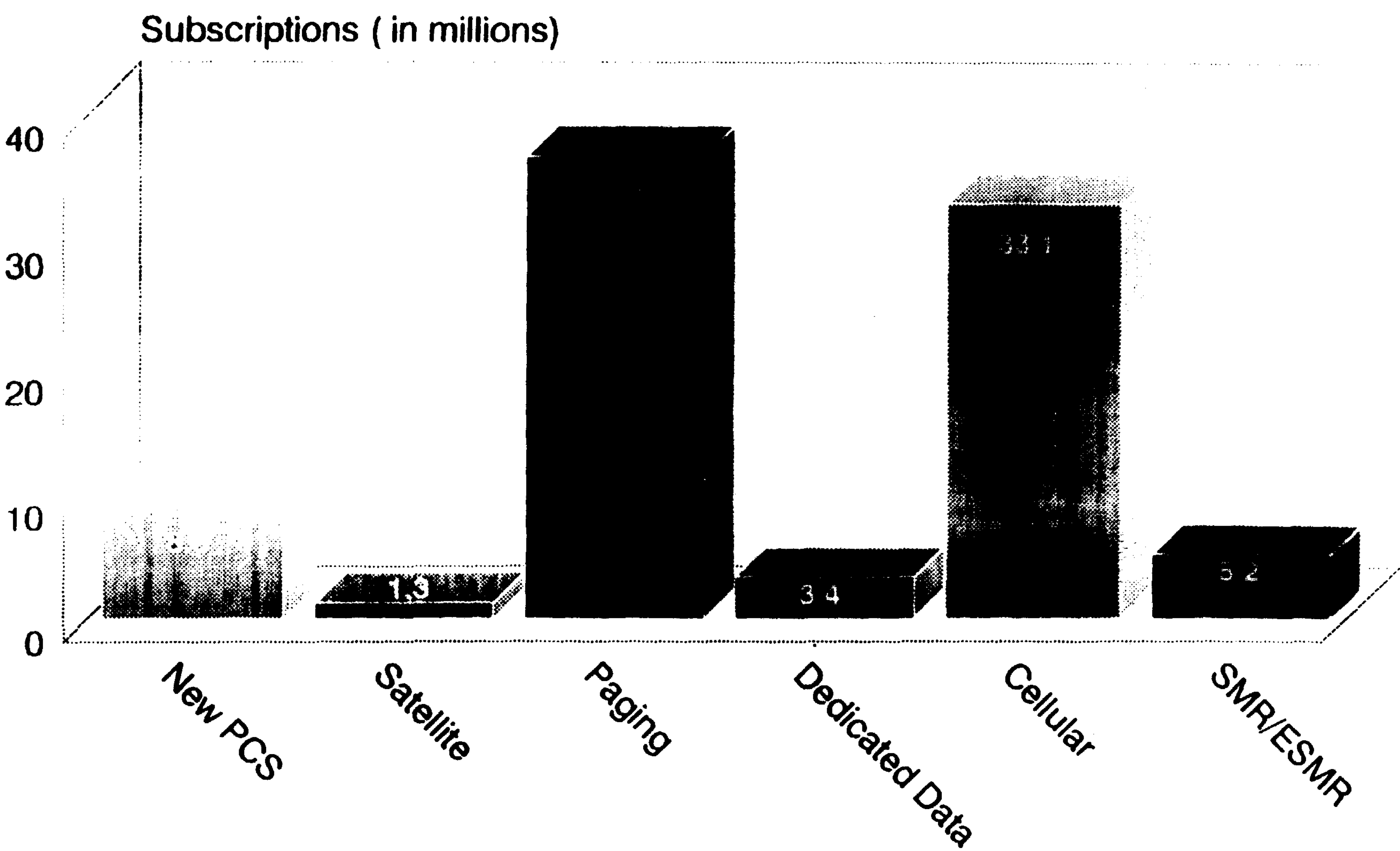

*Personal Communications Industry Association*

# Total 1993 Wireless Demand Distribution

## In 1993 there were 33.7 million wireless subscriptions according to the following distribution:



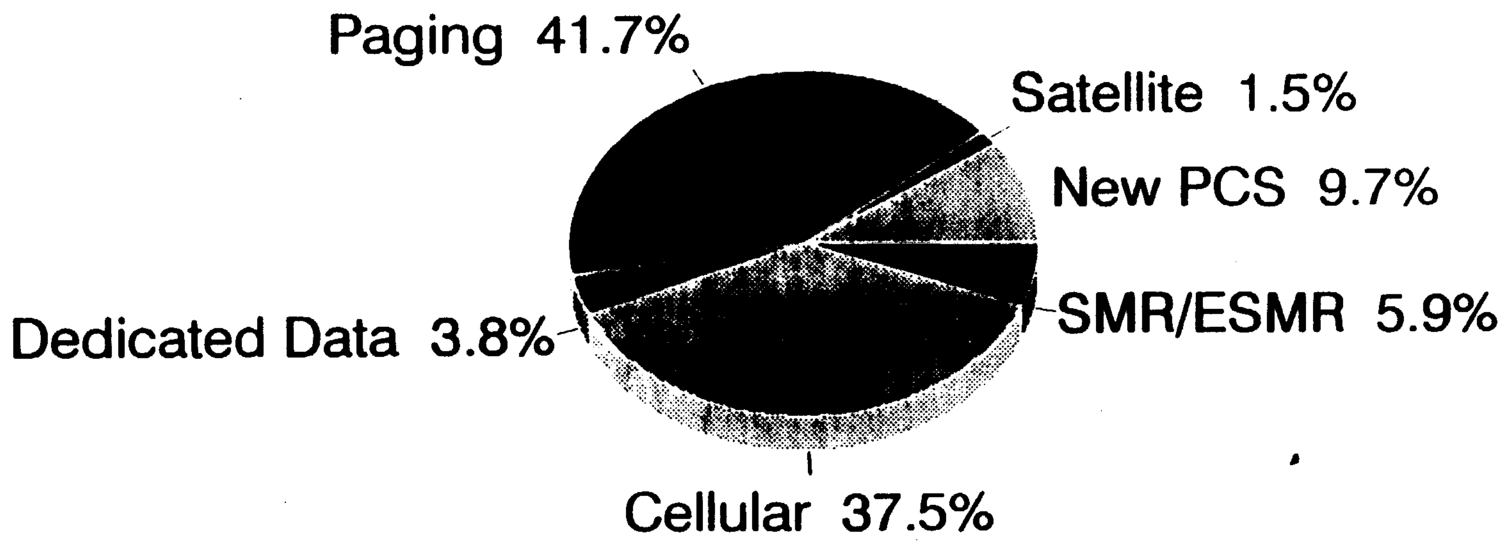
# 1998 Subscriptions Estimates



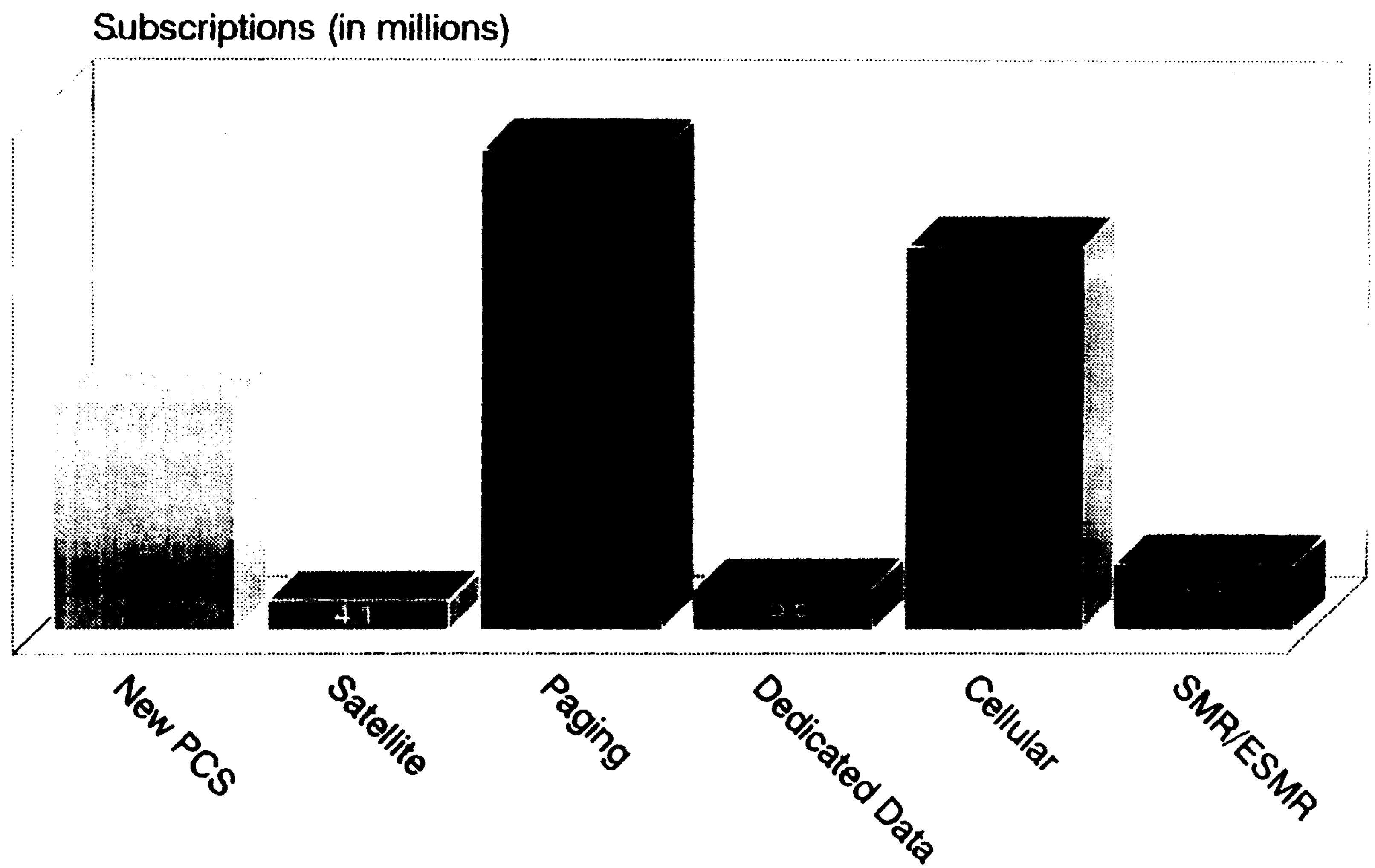

*Personal Communications Industry Association*

# 1998 Wireless Demand Distribution

**In Year 5 we forecast 88.3 million wireless subscriptions according to the following distribution:**



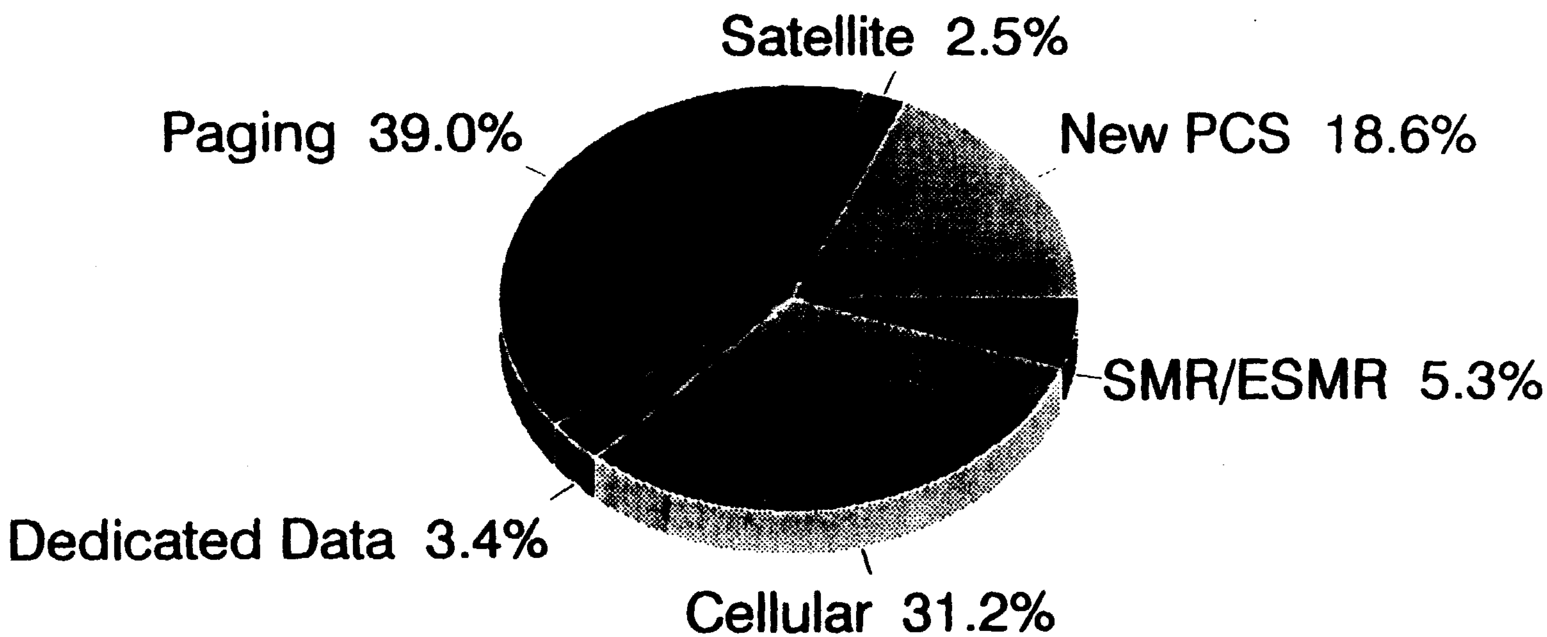
# 2003 Subscriptions Estimates



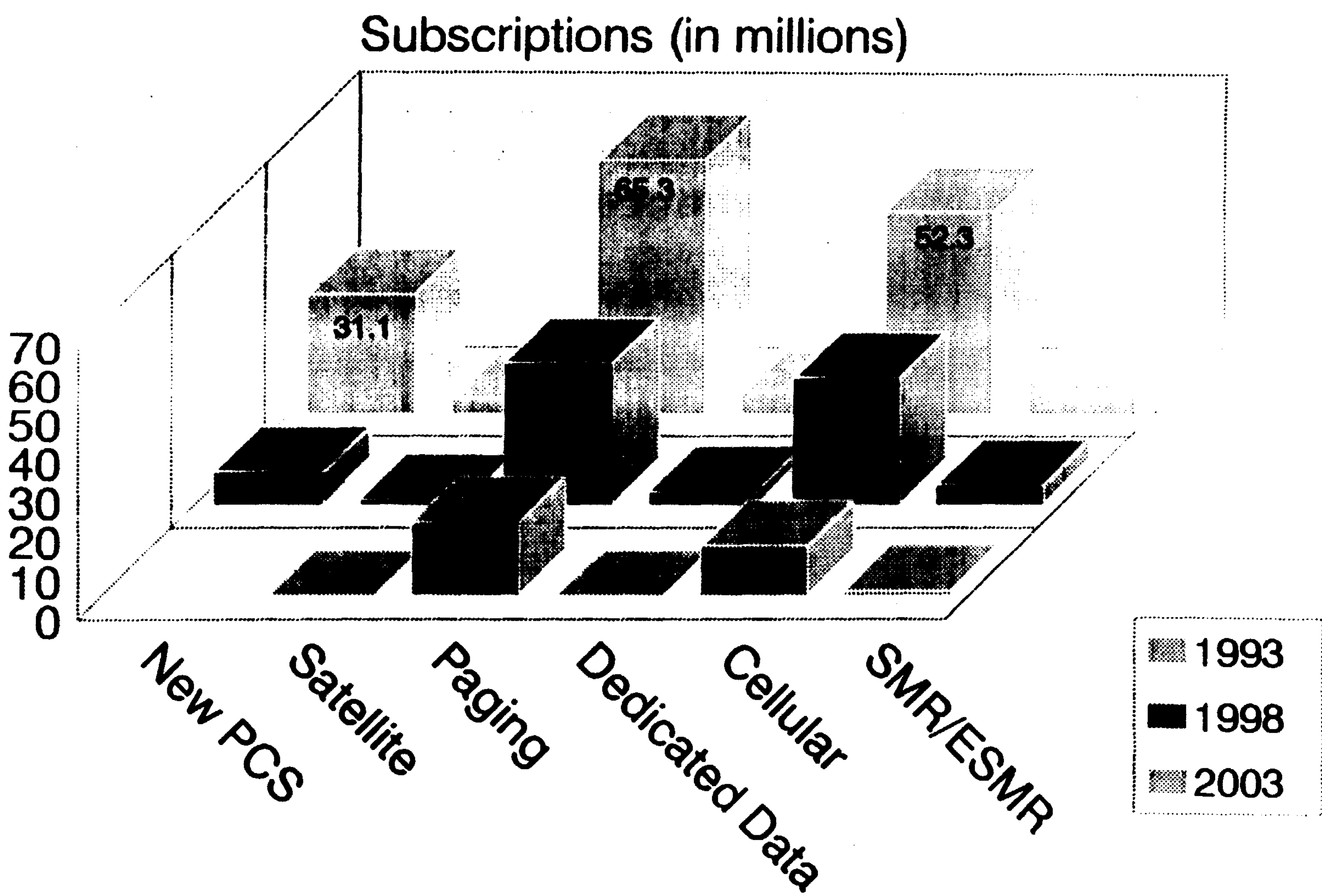

*Personal Communications Industry Association*

# 2003 Wireless Demand Distribution

**In Year 10 we forecast 167.4 million wireless subscriptions according to the following distribution:**



# 1993 - 2003 Total Subscriptions

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# Subscriber Growth Figures
# 1983-1993